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ABSTRACT

Current U.S. settlement patterns have begun to exhibit a significant shift away from very large metropolitan centers toward more thinly settled peripheral areas. This new trend has been the subject of many recent studies which have considered data on the county level but have been unable to detect population movement within counties and among individual communities. This study reports an analysis of data that can reveal, for the first time, these patterns within counties. The following questions are examined: (1) As population has dispersed outward from urban counties during the 1970s, what form of settlement has appeared in outlying counties? (2) What factors are associated with consolidation and/or dispersion at the local level? (3) What do local settlement patterns imply for the future redistribution of America's population? Findings indicate that growth in and around metropolitan centers continues to conform to the dispersion model. Outside those centers, however, settlement patterns appear to be mixing the processes of consolidation and dispersion, representing a sharp departure from the traditional nonmetropolitan pattern. Possible explanations for this new trend relate to: (1) the diseconomies of scale that accompany increased city size, and the diffusion of communication and transportation to nonmetropolitan communities; or (2) changing historical circumstances that have produced a "smaller is better" ethos. (Author/GC)

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INTRODUCTION

Settlement patterns in modern industrial nations reflect the operation of two traditional processes, consolidation and dispersion. Consolidation refers to the centripetal process, which, like a magnet, attracts population to the areas in and around large cities. Dispersion refers to the centrifugal process which pushes population away from existing population centers into thinly settled peripheral areas. In developed nations, consolidation has been the dominant process transforming them into highly urbanized societies. Dispersion, apart from its early role in opening up new areas for settlement, has recently affected only large urban agglomerations around which it has created a ring of low density suburbs.

Current U.S. settlement patterns have begun to exhibit new and interesting trends. The most widely discussed is the beginning of a significant shift away from very large metropolitan centers toward more thinly settled peripheral areas. This trend, which has its counterpart in other industrial nations including Japan,* has entailed net out-migration from the largest centers and net in-migration to very small rural communities. This shift is particularly significant, for it represents the reversal of a longstanding process of consolidation in and around large cities.

This new trend has been the subject of many recent studies, but most have been restricted to its manifestations at an overly coarse geographic scale, that of the U.S. county.** They have been unable to detect its

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*Shunichi Inoue, "Stagnant Growth of Japanese Major Metropolitan Regions in the Era of Post-Industrial Development," forthcoming through the International Union for the Scientific Study of Population.

**In the U.S., there are approximately 3,000 counties, the third level in a hierarchy that begins with the four Census regions and includes the 50 states as the second level. Counties vary considerably in area and population. Within California, for example, Los Angeles County contains over 7 million people while Alpine County has fewer than 500 residents. Similarly, San Bernardino County extends over 20,000 square miles, while San Francisco County covers less than 50 square miles.

manifestations within counties, and especially to examine recent patterns of growth among individual communities.

This study reports an analysis of data that can, for the first time, reveal what these patterns within counties are. The study focuses on the following questions: (1) As population has dispersed outward from large urban counties during the 1970s, what form of settlement has appeared within counties, especially within those outlying counties to which growth is now being directed? (2) What factors are associated with consolidation and/or dispersion at the local level? (3) What do local settlement patterns imply for the future redistribution of America's population?

Our findings, which are detailed ahead, indicate that growth in and around metropolitan centers continues to conform to the "dispersion" model. Outside those centers, however, settlement patterns appear to be mixing the two distinct processes of consolidation and dispersion. This mixture represents a sharp departure from the traditional nonmetropolitan pattern in which growth was primarily concentrated in large urban nodes.

This paper seeks to clarify these patterns; it also explores possible explanations. Several possibilities are considered. On the one hand, dispersion in large metropolitan areas may be a byproduct of the inevitable diseconomies of scale that accompany increased city size. Similarly, nonmetropolitan communities may be benefiting from technological improvements in transportation and communication that have traditionally widened the geographic range of economic opportunity and produced new metropolitan centers. Alternatively, the evidence of dispersion in both metropolitan and nonmetropolitan areas may signal a new trend in settlement patterns in response to changing historical circumstances that have produced a "smaller-is-better" ethos. Although we lack a fully specified theory of urbanization, these two alternative perspectives help to interpret current trends.

According to what we call an *urban maturation model*, consolidation and dispersion can be regarded as two phases of a single underlying urbanization process that produces an ever more balanced distribution of population (Gibbs, 1963; Morrill, 1979). From this perspective, the dispersal of population into nonmetropolitan territory where it consolidates into dominant urban nodes, represents the formation of future metropolitan

centers. In contrast, the dispersion of metropolitan population from a densely settled core into a thinly settled periphery fills in empty territory between metropolitan areas. The simultaneous occurrence of consolidation and dispersion in different areas simply reflects the fact that sustained urban development begins in different places at different times.

Alternatively, what we call the *historical model* emphasizes the historical factors that shape population distribution trends. According to this view recent technological and demographic developments (most notably, improvements in transportation and communication technologies and slowing population growth) have combined with a long held American bias against large cities to alter the "parameters" of urban development (Phillips and Brunn, 1978; Vining and Strauss, 1977; Zuiches, 1978). The slowing of natural population growth through low fertility has accentuated the inherently uneven local and regional impacts of migratory redistribution. Compounding this situation, technological changes have accentuated the importance of climatic and transportation differentials between areas and have enabled more people to act upon the traditional American preferences for the amenities of small city living. As a result, the growth of regions and metropolitan areas more closely approximates a zero-sum game, with one area's gain being another area's loss. Older, densely settled regions and metropolitan centers are now losing population to newer less densely settled and amenity-rich areas. Proponents of this view cite the reversal of nonmetropolitan out-migration and the intensified migratory shift to Southern and Western regions of the U.S. (the so-called Sunbelt) as evidence. They foresee an intensification of dispersion within the metropolitan sector and its beginnings within the nonmetropolitan sector as well.

The next section of this paper introduces the analytical approach used to examine recent trends in community growth. The following section briefly reviews the historical record including both the longer-term pattern and recent trends. Next, we present the evidence on recent patterns of community growth. Finally, we discuss the implications of these findings for future settlement patterns.

ANALYTICAL APPROACH

Our analysis is predicated on the assumption that the dynamic underlying recent redistribution trends can only be understood by examining the broader geographic context of recent growth trends. Simple comparisons of community growth in the nation as a whole are apt to be misleading. Instead, we maintain that the underlying dynamics can be deciphered only by examining *patterns of growth among individual communities within particular geographic areas.*

Several factors must be considered in classifying local communities and their broader geographic contexts. These factors include: (1) a community's size; (2) its proximity to other, especially larger, places; (3) its region, since a local area's growth will be conditioned by the rate of growth in the region in which it is located; (4) its historical development, since the structure of a community, shaped as it is by the economic, demographic, and technological character of the period in which it began its sustained development, may not be conducive to growth in a different historical period.

The importance of community size as a determinant of future growth reflects diminishing further benefits of continued growth given an existing level of agglomeration. Thus, a community's ability to attract and absorb new residents will vary with its size. Traditionally, this principle has operated to concentrate growth; although recent population decline in certain metropolitan areas (both central cities and suburbs alike),* suggests that the principle of diminishing returns may have reversed that trend in the largest metropolitan areas.

The importance of current size to future growth, however, extends beyond the local place itself. A place's proximity to other larger communities may allow it to, in effect, "borrow" size from its larger neighbors (Alonso, 1973). Thus, small communities on the outskirts of large metropolitan centers have access to the economic and cultural facilities of larger centers that comparable communities located in remote thinly

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*Between 1970 and 1978, the 15 largest metropolitan areas lost over 3 million migrants. [Bureau of Census, 1979]

settled areas do not.* While the benefits of proximity have supported the consolidation process on one level (by linking together distinct communities into large functional urban agglomerations), they have also facilitated greater dispersion of population within those areas. Recent changes in transportation and communication technologies may have strengthened this dispersion process by expanding effective proximity.

A community's growth will also be affected by the growth of the region in which it is located. Communities in growing regions, for example, enjoy a decided growth advantage over those in declining regions since the development of cities and regions is often reciprocal. Growing cities require expanding markets, which, in turn, support further growth. This reciprocal relationship tends to imprint a unique regional character on cities which reflects the distinctive flavor of the historical period in which both experienced sustained development. In addition to these contextual influences, regional differences in institutional practices also affect a community's growth potential. For example, differences in annexation procedures which make it considerably more difficult for large cities to annex adjacent territory in some regions than in others have influenced community growth unevenly.**

Finally, communities, like individuals, vary in their degree of maturity and those differences affect potential future growth. Thus, an urban form established in one era, may limit or facilitate growth in a subsequent period. The evolution of America's urban system, for example, can be divided into four distinct technological and economic eras, each characterized by a historically distinct urban structure (Borchert, 1978). At one extreme are the high density congested structures of the older Northeastern cities; at the other are the automobile age

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*The growth stimulus provided by such proximity is apparent in the fact that small places adjacent to large urban centers have grown more rapidly than their isolated counterparts (Ratcliffe, 1942; Hassinger, 1957; Fuguitt, 1971).

**The importance of such institutional factors is underscored by a recent study which demonstrates that 44 percent of city growth in metropolitan areas and 89 percent of city growth in nonmetropolitan areas during the 1960s resulted from annexation (Klaff and Fuguitt, 1978).

sprawl cities of the Western U.S. While neither form in and of itself causes growth, each reflects a distinctive set of operating conditions which, in an open and evolving urban system, may limit or facilitate continued growth when historical conditions change.

Since each of these factors can affect local growth patterns, their influence must be considered before the dynamic behind these patterns can be identified. Consequently, the effects of each of these factors is evaluated in our analysis of recent growth patterns among local communities. Before we present that analysis, however, we first provide a benchmark for comparison by describing historical patterns of settlement.

HISTORICAL PATTERNS OF SETTLEMENT IN THE U.S.

Traditionally, population consolidation has been the dominant process shaping America's settlement pattern. The longstanding advantages of agglomeration have drawn people together into cities, transforming the United States from a rural society a century ago to one that today is almost 75 percent metropolitan.

This urbanization of the American landscape has been the product of increases in both the number of urban places and the size of those places. For example, between 1900 and 1970, the number of urban places nearly tripled while the median size of such places increased by almost 40 percent.

To better document the changing residential configuration of its population, the government in 1940 began defining the areas of urban settlement in and around large cities as "metropolitan districts." Since then the initial 168 such areas containing 50 percent of America's population have expanded to 277 Standard Metropolitan Statistical areas (as they are now known) and contain almost 75 percent of the population, testifying to the strength of the consolidation process. Further evidence of this consolidation is provided by the experience of the territory outside metropolitan areas that constitutes what is defined as "nonmetropolitan." Between 1940 and 1975, for example, the population of nonmetropolitan areas declined by almost four million, whereas the total U.S.

population increased by over 80 million.*

Although consolidation has clearly been the dominant process at the scale of metropolitan and nonmetropolitan areas, prior to 1970 patterns of settlement differed sharply at the scale of local communities. Within nonmetropolitan areas, for example, patterns of community growth reflected a strong consolidation dynamic. Throughout the pre-1970 period, the only nonmetropolitan communities experiencing significant growth were large urban nodes, which, like magnets, attracted population away from smaller towns and villages. As a consequence, the distribution of growth within nonmetropolitan areas resembled a pyramid with the highest growth rates observed in a central urban node and progressively lower rates of growth observed as one proceeded away from that node (Ratcliffe, 1942; Northam, 1969; Fuguitt and Beale, 1978). In contrast, the distribution of growth within metropolitan areas resembled a doughnut. The center of the doughnut, the large central city, grew relatively slowly or not at all, while growth rates increased progressively in each of the succeeding suburban rings. Indeed, prior to 1970, many of the largest central cities experienced absolute population losses to their ever-expanding suburban peripheries.

Since 1970 the dominance of the consolidation process at the county level has waned considerably. For example, between 1970 and 1978, the population of nonmetropolitan areas increased more than 10 percent while that of metropolitan areas grew only 6 percent. More importantly, the balance of migration, the principal demographic component of growth in periods of low fertility, has shifted from metropolitan to nonmetropolitan areas. This weakening of the consolidation process is readily apparent in a comparison of population growth trends between 1960-1970 and 1970-1974 among different types of metropolitan and nonmetropolitan counties (see Figure 1).**

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*To some extent this nonmetropolitan loss is the byproduct of areas being reclassified from nonmetropolitan to metropolitan; however, between 1950 and 1960, 90 percent of the counties classified as nonmetropolitan at both periods lost migrants and, between 1960 and 1970, 75 percent of such counties lost migrants.

**A more complete description of recent metropolitan and nonmetropolitan growth patterns is contained in McCarthy and Morrison, 1979.

In this figure metropolitan counties are classified into four types: core counties of large metropolitan areas (over one million inhabitants), fringe counties of large metropolitan areas, counties in medium-sized metropolitan areas (between 250,000 and one million inhabitants), and small metropolitan counties (less than 250,000 inhabitants). Nonmetropolitan counties are in turn classified according to the size of their urban population and their adjacency to metropolitan areas. In this nonmetropolitan classification, we refer to a dimension of urban influence in which each succeeding group is affected to a lesser degree by the social and economic conditions of urban areas. This includes the influence of urban areas at a distance as well as within the counties themselves (U.S.D.A., 1974). In the figure the endpoints of each line show the average annual rate of population growth for each type of county for the 1960-1970 and 1970-1974 periods respectively; the slope of the line indicates the direction and magnitude of change.

The weakening of the consolidation process is manifested in several ways in this figure. In metropolitan counties, for example, population growth has virtually halted in the typical large-metropolitan-core county and has slowed slightly in the large metropolitan fringe county (which nonetheless has retained its lead as the fastest growing type). The typical medium- and small-metropolitan counties show the opposite trend: their growth has accelerated. In addition, and in contrast to past patterns, all types of nonmetropolitan counties are now growing. Moreover, the most striking increases have occurred in rural counties which have traditionally experienced the weakest growth. This figure also indicates that the recent revival of nonmetropolitan growth is not simply a byproduct of metropolitan growth spilling over into nonmetropolitan areas since it is evident both in nonadjacent as well as adjacent nonmetropolitan counties.

Thus, at the scale of metropolitan and nonmetropolitan counties, recent trends suggest that a significant shift in settlement patterns is underway. However, as we emphasized above, a true picture of the redistribution dynamic can only be obtained by looking at patterns of community growth within counties. Consequently, we now turn to an examination of recent growth patterns at the scale of communities.

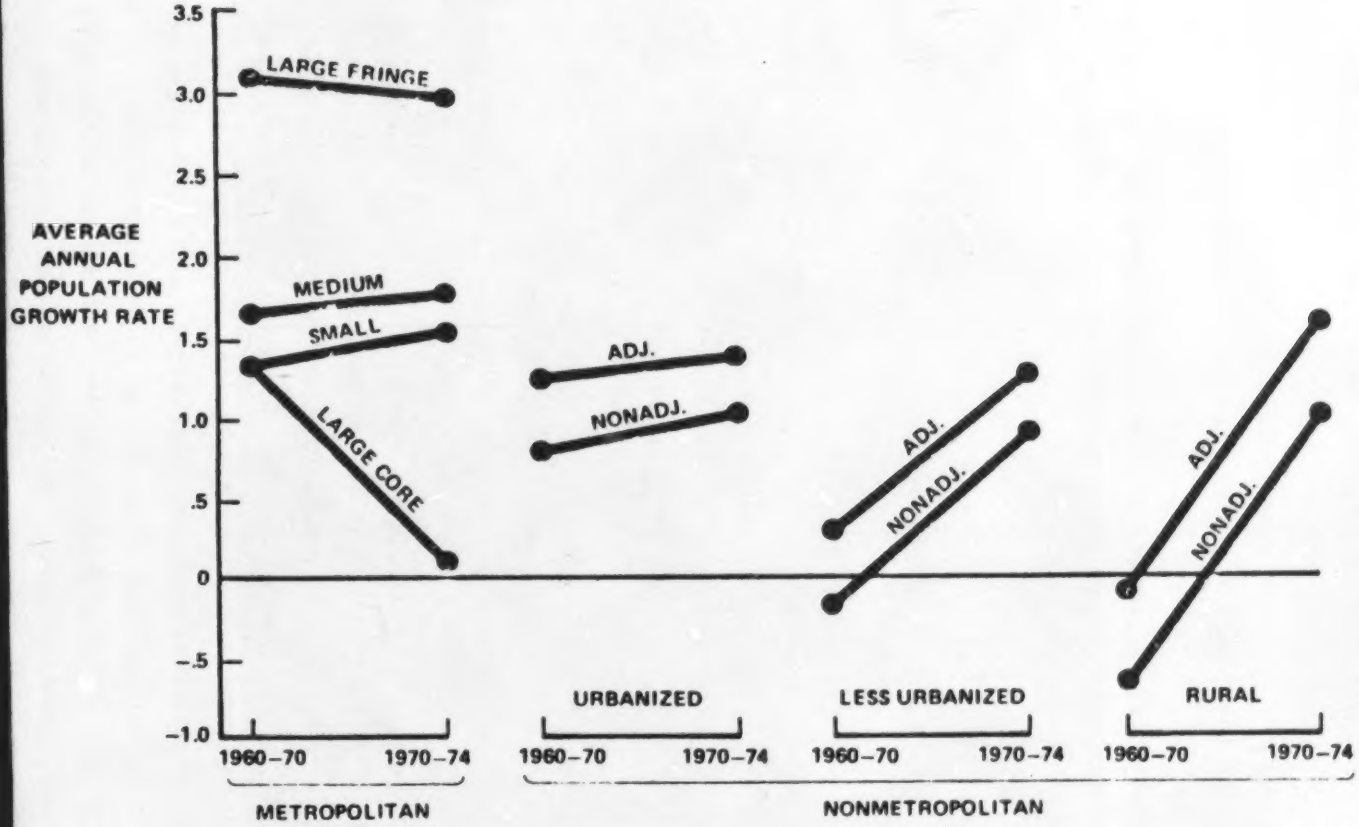

Fig. 1 - Change in Average Annual Population Growth Rates, 1960-1970 vs. 1970-1974, by County Type

RECENT PATTERNS OF COMMUNITY GROWTH

If the recent revival of nonmetropolitan growth has affected settlement patterns at the county level, that change should be reflected in changes in the traditional metropolitan "doughnut" and nonmetropolitan "pyramid" patterns of growth. In the classic pyramid growth pattern, communities' sizes and rates of growth increase together so that larger places grow faster than smaller places. In the doughnut pattern the reverse is true.

Simple comparisons of growth, of course, are likely to obscure any such changes. This point is clearly demonstrated by the comparison of recent community growth patterns in Table 1. When metropolitan and nonmetropolitan places are considered together, dispersion clearly dominates. Thus, among all cities, small communities have consistently grown faster than larger cities, a pattern consistent with the "doughnut" pattern of development.

However, when metropolitan and nonmetropolitan areas are considered separately, clear evidence of a change in nonmetropolitan settlement patterns emerges. Instead of the classic pyramid pattern, a more complex pattern, suggesting simultaneous consolidation and dispersion, is apparent. Thus, between 1970 and 1976, the largest nonmetropolitan cities have grown faster than medium-sized communities but not as fast as the smallest nonmetropolitan places. Within metropolitan areas, on the other hand, contemporary trends reveal clear evidence of continuing dispersion (the doughnut pattern)--no doubt reflecting the continuing suburbanization of metropolitan populations.

Although neither the consolidation nor the dispersion patterns in nonmetropolitan areas is as clear as the dispersion pattern among metropolitan communities, their simultaneous appearance is striking, given the historical pattern of nonmetropolitan consolidation. Indeed, the sudden appearance of nonmetropolitan dispersion, as reflected in the rapid growth of small nonmetropolitan communities, implies that the settlement patterns in nonmetropolitan areas may be in transition. Whether that transition is towards the metropolitan pattern thus signaling the appearance of indigenous nonmetropolitan suburbanization, or towards some new pattern, remains to be seen.

TABLE 1

COMPARISON OF ANNUAL GROWTH RATES AMONG METROPOLITAN AND NONMETROPOLITAN COMMUNITIES IN THE UNITED STATES BY SIZE OF COMMUNITY, 1970 TO 1976.

Population Size in 1970	AVERAGE ANNUAL GROWTH RATE BY METROPOLITAN STATUS		
	Metropolitan	Nonmetropolitan	All Cities
100,000+	-.06	-	-.06
50-99,999	.38	-	.38
25-49,999	.57	.69	.61
10-24,999	1.40	.64	1.10
5- 9,999	1.74	.51	1.17
2.5- 4,999	2.21	.68	1.37
1- 2,499	2.24	.99	1.42
ALL SIZES	1.69	.80	1.22

SOURCE: The 1970 population data are based on the 1970 U.S. Census of Population. The 1976 population data are estimates produced by the Census Bureau through the Federal-State Cooperative Program for local Population Estimates.

Of course, the simple metropolitan-nonmetropolitan dichotomy, implying a discrete break, inadequately captures the broad continuum of settlement contexts that actually exist. This continuum ranges from small isolated urban places to regional metropolitan agglomerations with millions of inhabitants in scores of politically independent communities. To obtain a more comprehensive measure of that geographic diversity, we have classified metropolitan and nonmetropolitan areas according to their size and their proximity to larger areas. The classification scheme used is similar to that employed in Figure 1. Specifically, metropolitan areas are grouped into three urbanization categories according to their total population size: large (over one million residents); medium (between 250,000 and 1 million residents), and small (less than 250,000 residents). Nonmetropolitan areas, in turn, are classified in terms of the size of their urban population (urbanized vs. thinly settled) and their proximity to metropolitan areas. Urbanized areas are those with at least 10,000 urban residents.)* Thinly settled areas are those with fewer urban residents. Metropolitan proximity is determined by whether the nonmetropolitan county is adjacent or nonadjacent to a metropolitan area. As previously noted, places that are adjacent to metropolitan cities have traditionally registered higher growth rates than their nonadjacent counterparts.

The purpose of this classification is to obtain a finer measure of the diversity of geographic contexts in which communities are located and thus to gain a better perspective on the dynamics behind recent settlement patterns. Recent growth patterns for different size communities within each of the three metropolitan categories are shown in Fig.2.

The clear evidence of dispersion in all three metropolitan categories in this figure indicates that rapid suburbanization characterizes not simply the largest metropolitan areas, but is pervasive throughout the metropolitan sector. Thus, regardless of SMSA size, the smallest cities register the highest growth rates, as evidenced by the upwardly sloping lines. To the extent that these small places generally lie at the periphery of metropolitan areas (whereas medium-sized places--those with

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*Residents are classified as "urban" if they live in an incorporated or unincorporated place of 2,500 inhabitants.

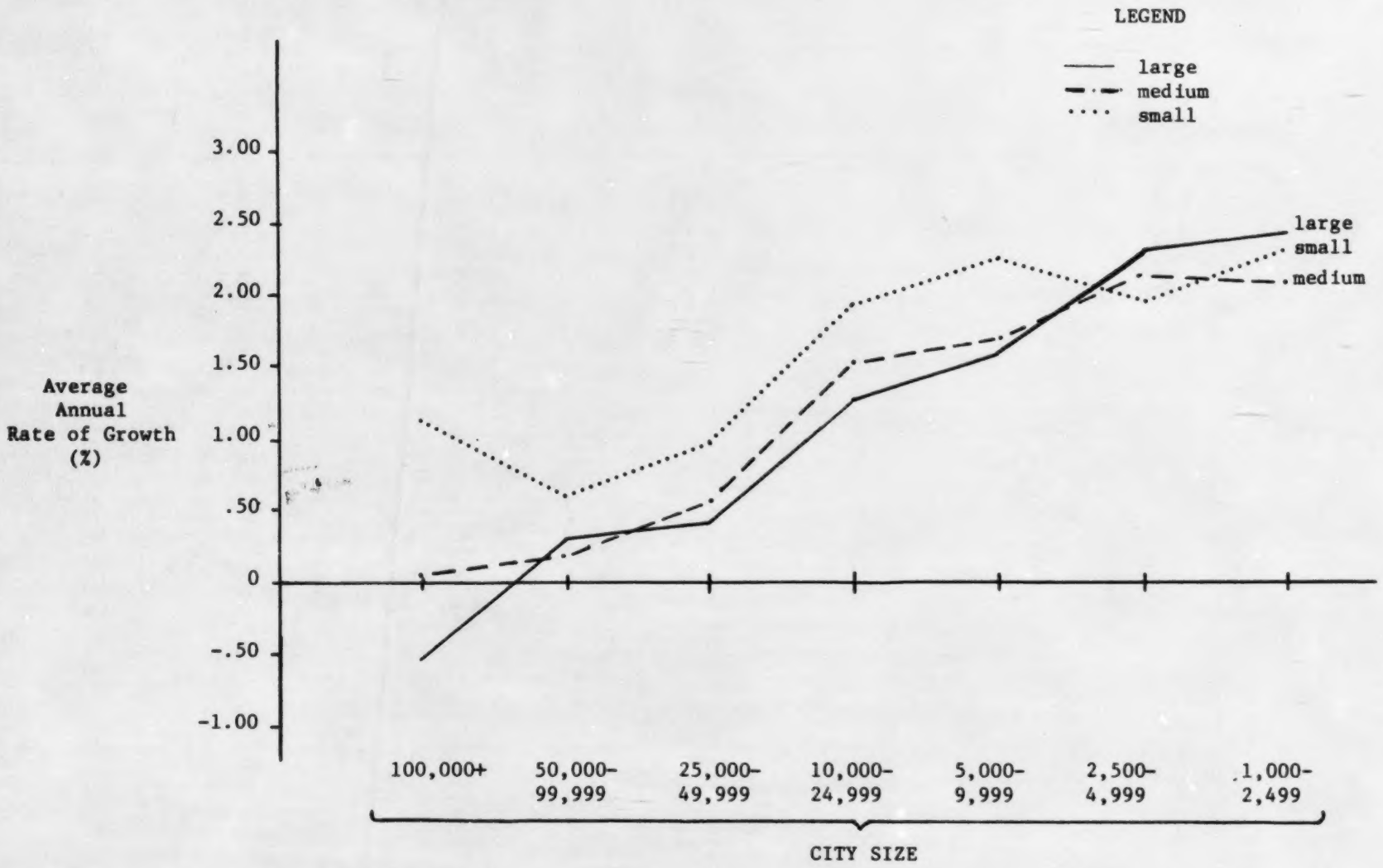

Figure 2--Patterns of city growth within metropolitan counties by size of metropolitan area, 1970 to 1976

10,000 to 49,999 inhabitants--are nearer to the metropolitan core), this finding replicates the traditional doughnut patterns of metropolitan growth, i.e., slow growth in the central core and rapid growth in an expanding periphery.

Despite its pervasiveness, the intensity of metropolitan dispersion varies with metropolitan size in two ways. First, as indicated by the slope of each line, the dispersion process is most pronounced in the largest areas, slightly less pronounced in middle-sized areas, and least pronounced in the smallest areas. Indeed, absolute population decline in the metropolitan core is characteristic only of the largest metropolitan areas. Second, among communities of a given size, those located in small metropolitan areas have grown faster than those in medium and large metropolitan areas. To the extent that population size reflects different degrees of settlement maturation, these growth differentials support the maturation model of development.

Unlike recent patterns of metropolitan growth, which reflect a continuation of past trends, the recent pattern of settlement growth in nonmetropolitan areas (pictured in Figure 3), suggest that significant changes may be underway. For example, nowhere is the traditional pyramid structure of growth evident. Instead, in three of the four types of nonmetropolitan areas simultaneous dispersion and consolidation appear to be occurring and, in urbanized-adjacent counties, only dispersion is evident. In sum, recent patterns of community growth point towards an evolution of nonmetropolitan settlement patterns away from population consolidation towards a more balanced pattern of growth.

Although evident in all types of nonmetropolitan areas, the intensity of this transition appears to vary both with level of urbanization and metropolitan proximity. For example, the growth differential between the smallest and largest places is most pronounced in the more urbanized areas, suggesting that the process of population dispersion is more advanced there. On the other hand, the ratio of growth rates in large communities to those in smaller communities is higher in nonadjacent than adjacent areas, suggesting that consolidation, to the extent it appears, may be more prevalent there. Thus, insofar as a transition in settlement patterns can be measured as a transition from the classic pyramid structure of growth (according to which growth rates would be highest in the

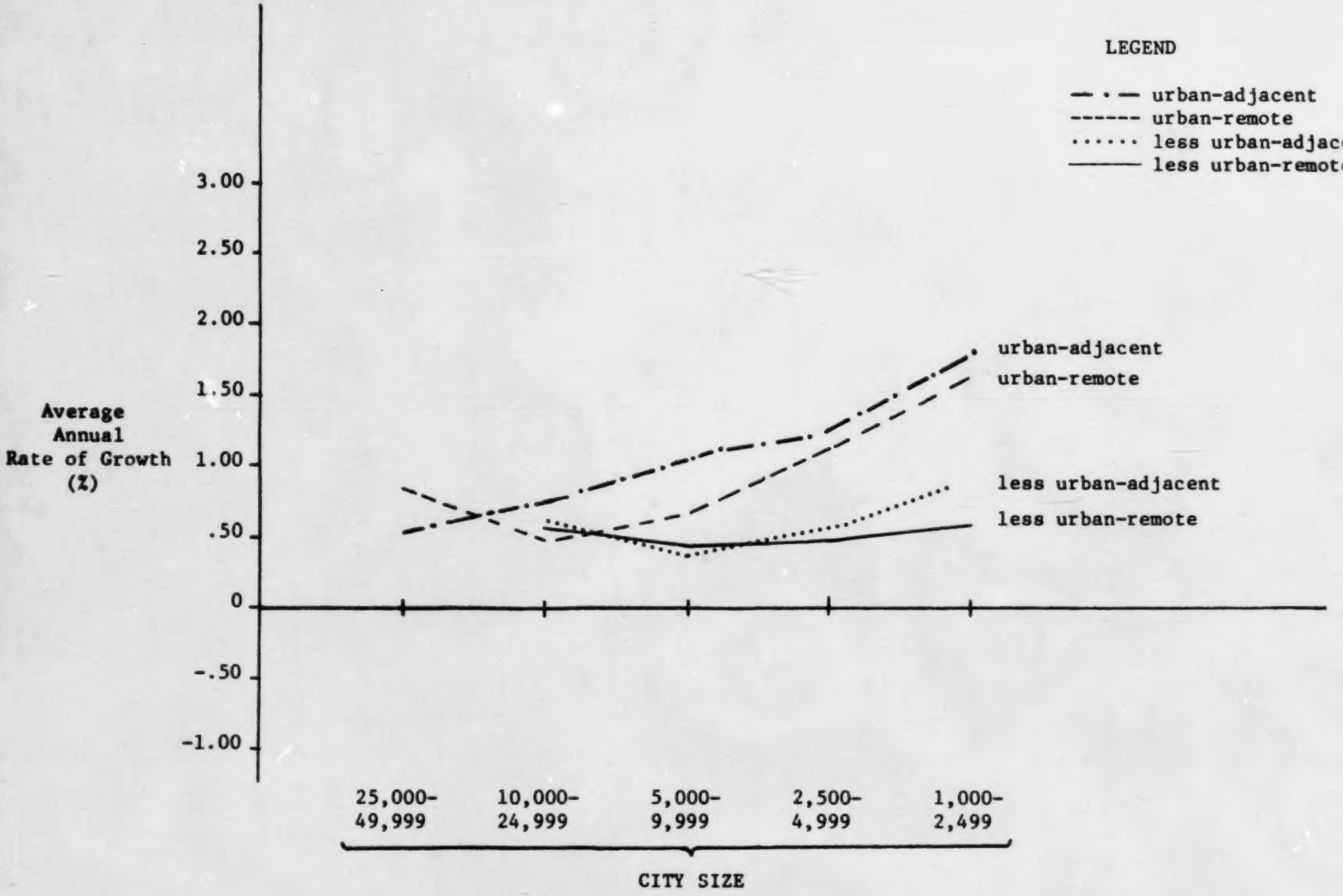

Figure 3--Patterns of city growth within nonmetropolitan counties by type of nonmetropolitan area, 1970 to 1976

largest places and thereafter decline), change is most noticeable in urbanized adjacent areas, slightly less strong in urbanized-remote areas, distinctly less pronounced in less densely settled adjacent areas, and least clear in less densely settled remote areas. Since each succeeding type of nonmetropolitan county in this sequence is affected to a lesser degree by the social and economic conditions of urban areas, this pattern suggests that the extent of the changes underway in nonmetropolitan settlement patterns is directly related to the degree of urban influence in a particular area. In other words, changes in the traditional pattern are most pronounced in the most urbanized areas and least pronounced in the least urbanized areas--a sequence that is consistent with the maturation model of development.

Although this sequence of changes follows the pattern predicted by the maturation model, the specific changes underway in nonmetropolitan settlement patterns are decidedly untraditional. In the traditional maturation model, for example, nonmetropolitan growth is concentrated in the largest urban nodes and represents the formation of future metropolitan centers. Accordingly, dispersion should emerge only after metropolitan status is achieved. However, the current pattern suggests that dispersion is occurring, to some degree, throughout the nonmetropolitan sector. In urbanized nonmetropolitan areas, that dispersion appears to represent a form of indigenous suburbanization as smaller communities grow up around predominate urban nodes in much the same fashion as suburbs appear in metropolitan areas. The novelty here is not the process itself but rather the fact that it now appears to be occurring at an earlier stage in the development sequence. In less urbanized nonmetropolitan areas, on the other hand, dispersion may represent more the absence of the traditional consolidation process, i.e., the emergence of a dominant urban node, than suburbanization _per se_. In either case, however, this trend will produce a less consolidated pattern of nonmetropolitan growth.

Despite its apparent demise as the dominant settlement process, nonmetropolitan consolidation is still apparent in comparisons across counties. Figure 4, which compares growth rates among communities of equal size in each of the four nonmetropolitan categories, reveals a more or less consistent rank order that coincides with degree of urbanization:

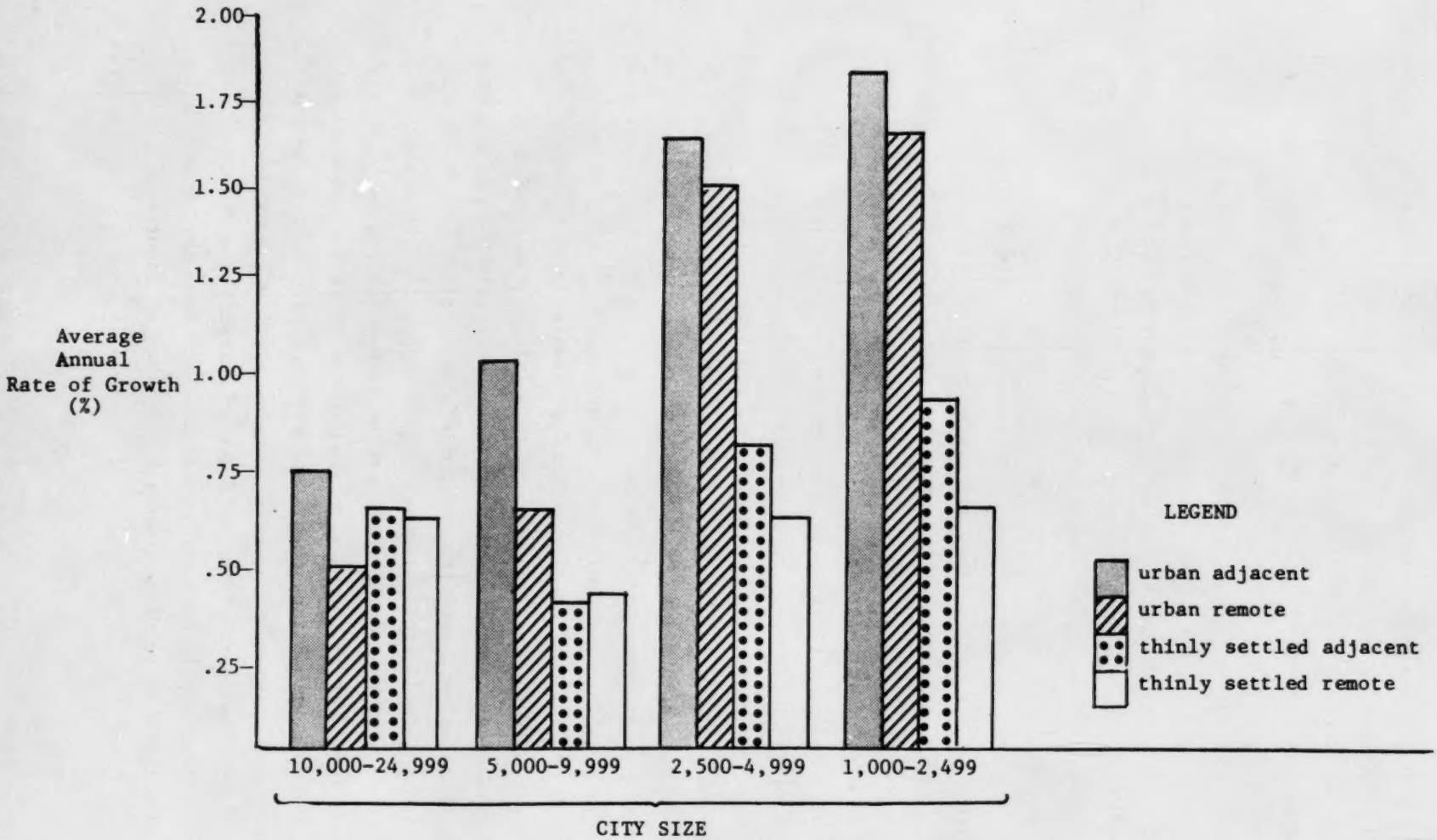

Figure 4--Patterns of city growth within the nonmetropolitan sector by type of nonmetropolitan county and city size, 1970-1976

Growth rates are generally highest in urbanized adjacent areas, followed by urbanized remote, less densely settled adjacent areas, and finally less densely settled remote areas. Thus, consolidation continues to operate within the nonmetropolitan sector; what has changed are its manifestations at the local scale. Instead of the traditional pyramid structure with large urban nodes attracting population from surrounding villages and towns, growth patterns now display a more dispersed pattern with those smaller villages and towns often growing more rapidly than the previously dominant central urban nodes. However, when comparing patterns between nonmetropolitan areas, consolidation continues to produce the most rapid growth in the most urbanized areas.

In summary, recent patterns of metropolitan and nonmetropolitan growth reveal both continuities and discontinuities with traditional trends. In the metropolitan sector, dispersion continues to be the dominant process, both within and between areas. Within metropolitan areas, continuity is reflected in the traditional "doughnut" pattern of growth with slow growth or decline in the central core and rapid growth in the suburban periphery. Between areas it is reflected in the more rapid growth of communities in smaller metropolitan areas. In the nonmetropolitan sector, on the other hand, growth patterns within areas reflect a sharp break with prior trends while growth between areas follows the traditional consolidation pattern. Within nonmetropolitan areas, for example, the traditional pyramid structure of growth has been replaced by a more complex pattern of simultaneous dispersion and, to a lesser extent, consolidation. Between areas, the traditional growth advantages associated with urbanization continue to be apparent.

In combination these patterns provide support for both the urban maturation and the historical models of development. When comparing trends between areas, evidence of more rapid community growth in less urbanized areas within the metropolitan sector and the reverse pattern within the nonmetropolitan sector supports the urban maturation perspective's evolutionary sequence. However, when comparing patterns within areas, the overwhelming evidence of metropolitan and nonmetropolitan dispersion suggests the appearance of a new, more evenly distributed pattern of settlement within all types of counties.

GROWTH PATTERNS WITHIN REGIONS

Although neither regional nor historical factors can, in and of themselves, reveal the dynamic underlying recent settlement patterns, patterned variations across regions, to the extent they exist, can tell us something about future redistribution trends. In the U.S., for example, each of the country's four principal regions experienced the formative effects of sustained development and growth in a different historical epoch and under very different structural conditions. The Northeast, for example, gave birth to the country's first major cities in an era when intraurban mobility was constrained by the limits of trolley tracks and the extent of pedestrian endurance. Relatively high densities and centralized industrial and commercial facilities in such major Eastern cities as New York, Philadelphia, and Boston provide continuing evidence of these formative factors. The major cities of the North Central region, in contrast, experienced their formative growth during the railroad epoch, when trunk line access to raw material sources and large Eastern markets, combined with greater flexibility in intraurban transport, supported a somewhat different settlement pattern. Thus, cities like Chicago, St. Louis, and Detroit, exhibit a greater dispersion of manufacturing into adjacent industrial suburbs, e.g., Gary, East St. Louis, and Hamtramack. An entirely different set of factors shaped the structure of cities in the West, where sustained development of major urban centers occurred after the advent of the automobile and promoted the appearance of "sprawl" cities in which commercial and industrial facilities often developed separately, to the extent that such places as Los Angeles and Phoenix appear to lack a central urban core. Finally, as in so many other aspects, the South represents a special case, incorporating as it does both cities of the older Eastern mold such as Charleston, South Carolina and New Orleans, Louisiana, and such prototypical "new" cities as Houston and Dallas, Texas. What stands out about the South, however, is that its transition from a predominately rural to a modern industrial region has occurred primarily in the last two decades.

Since historical conditions change and structures once conducive to growth later inhibit it, comparison of recent growth patterns across regions can reveal much about the evolutionary course of the settlement

maturation process. If, for example, settlement patterns evolve during the course of development in a more or less regular fashion, then trends now evident in mature regions will foreshadow the future shape of development in newly emergent areas. Consequently, we now examine recent patterns of community growth within each of the four major Census regions. As noted above, each of those regions experienced its major development thrust in a different historical epoch and under somewhat different structural conditions. Significant urbanization first occurred in the Northeast, followed by the North Central region, then the South, and, finally, the West. Thus, we would expect the process of settlement maturation to follow the same sequence.

Recent growth rates among metropolitan communities in each of the four Census regions, pictured in Figure 5, clearly demonstrate the importance of region in explaining differences in city growth. Among cities of a given size, growth rates are lowest in the Northeast, the oldest and most densely-settled region, and highest in the West, the most recently urbanized of the U.S.'s four regions. Growth rates in the North Central and Southern regions fall between these two extremes corresponding to the recentness of their sustained development.

What is most striking about this figure, however, is that despite the marked variation in growth rates across regions, the pattern of settlement growth within regions reflects a common dispersion dynamic. Thus, within each of the four regions, growth rates consistently decline with increasing city size. This pattern testifies to the strength of the dispersion process within metropolitan areas regardless of regional differences in settlement maturity. Thus, the classic "doughnut" pattern of growth is clearly evident in each of the four regions and only its intensity varies across regions.

Differences in nonmetropolitan community growth rates across regions (see Figure 6) follow the same pattern--a finding that reinforces region's importance as a determinant of community growth. For example, nonmetropolitan communities in the West which, on average, grew almost three times faster than those in the South, grew significantly faster than the Southern communities in each size category. Similarly, nonmetropolitan communities in the South, the next most rapidly growing region, grew appreciably faster than those in the North Central region, which, in turn, grew faster than

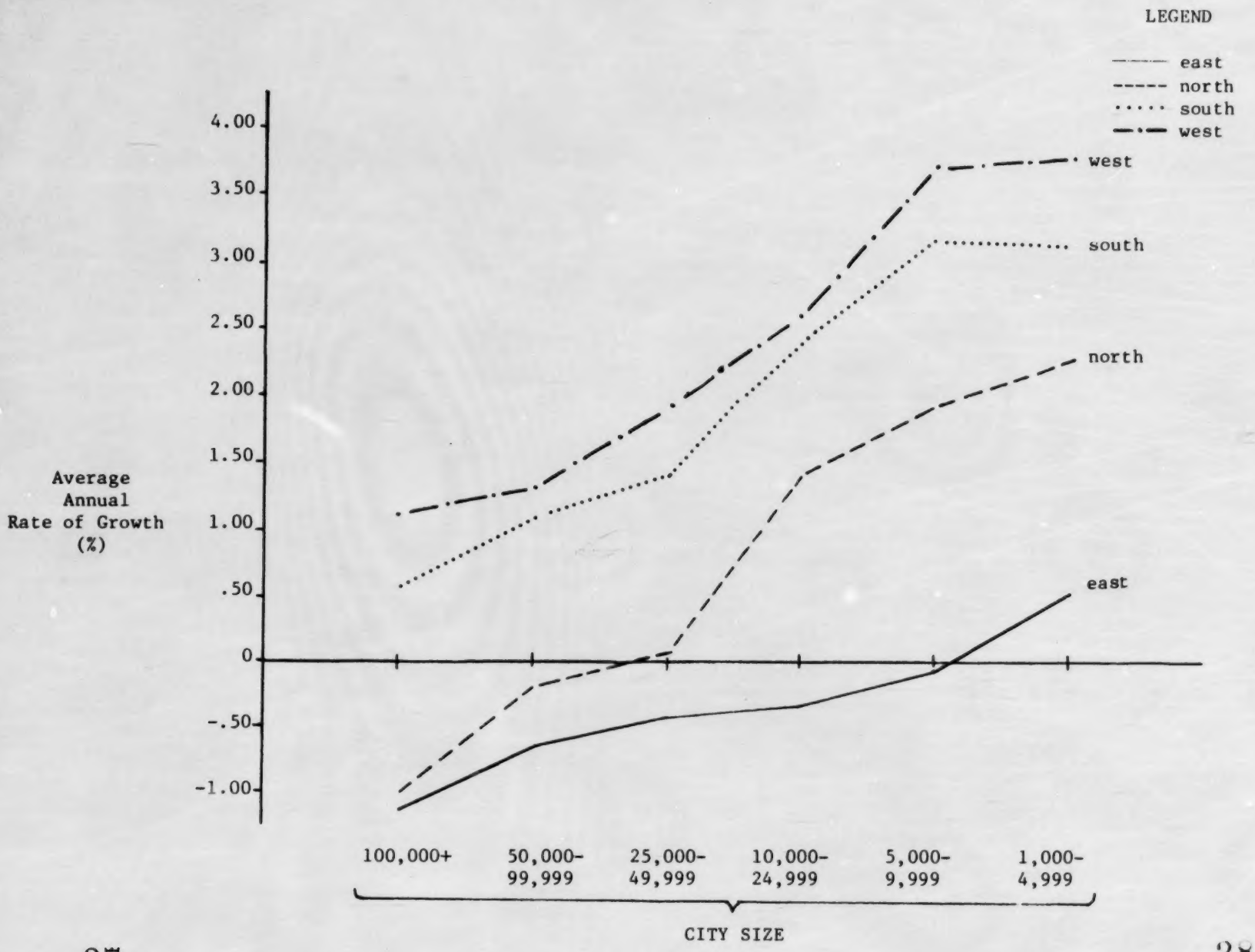

Figure 5--Patterns of city growth within metropolitan counties by region, 1970 to 1976.

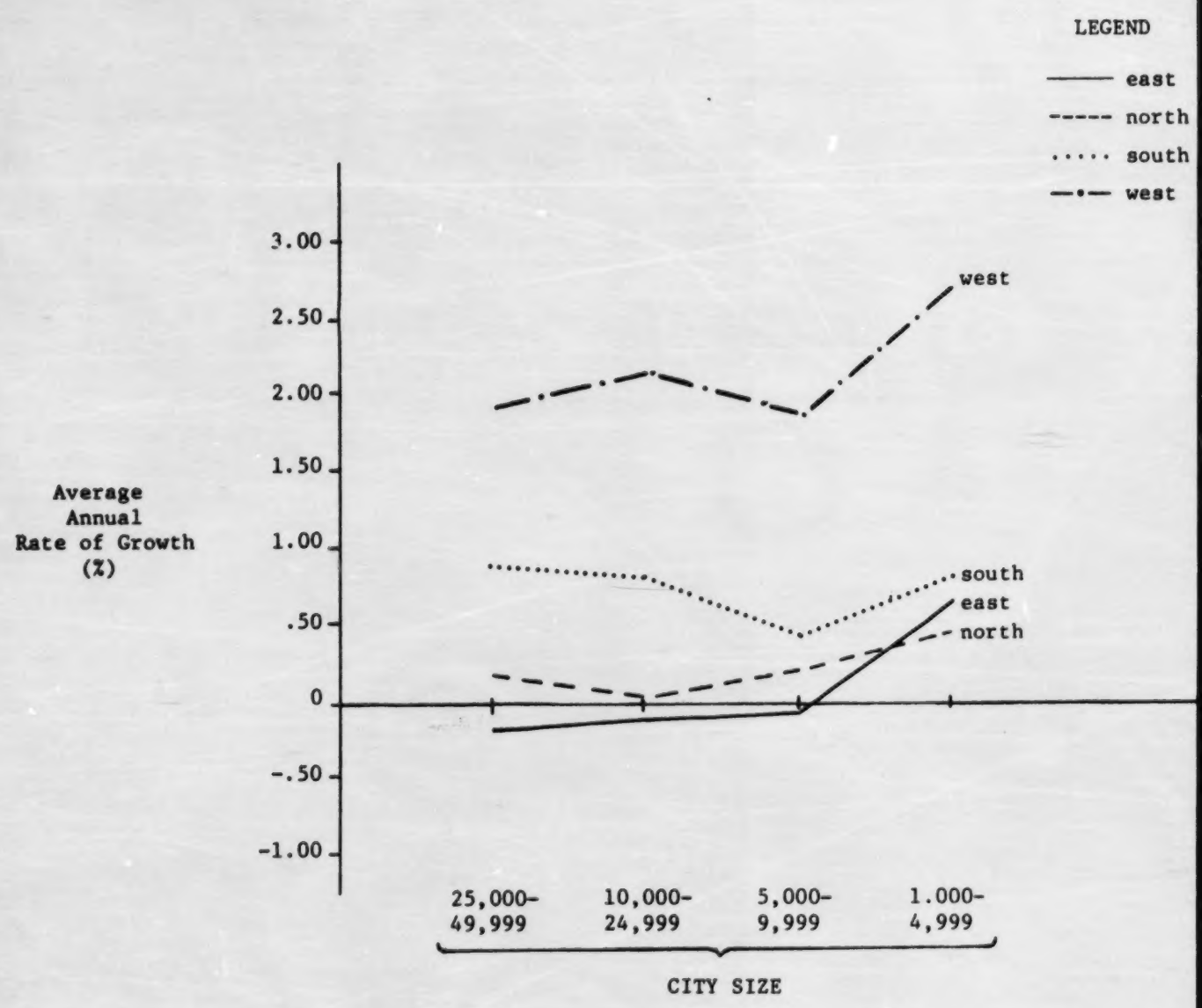

Figure 6--Patterns of city growth within nonmetropolitan counties by region, 1970 to 1976

those in the Northeast.

Despite significant regional differences in growth rates, nonmetropolitan settlement patterns within each region are strikingly consistent. Thus, settlement patterns within three of the four regions exhibit the combined influences of consolidation and dispersion and, in the Northeast, the most developed region, only dispersion is apparent. Moreover, none of the four regions show any marked evidence of the classic pyramid pattern of nonmetropolitan growth. To the extent that these regional differences accurately reflect differences in degree of settlement maturation, they also imply that the newly emergent pattern of nonmetropolitan dispersion is not a byproduct of the settlement maturation process. Instead, dispersion is evident both in older slow growth regions and in newer rapidly growing regions.

Despite their obvious importance, regional factors alone do not determine a local community's growth. Nor are all communities within a particular region at the same level of settlement maturity. Instead, each community's development potential is shaped both by regional and local influences so that individual areas within a region may differ substantially from the general regional level of development. To the extent that such differences exist, region alone may not provide an accurate indication of an area's development level. Instead, local growth rates may provide a better guide to an area's level of development. Consequently, we compare recent growth trends for metropolitan and nonmetropolitan communities grouped by the rate of growth of the county in which they are located in Figures 7 and 8.

Predictably, these comparisons reveal substantial differences in community growth rates according to the growth rate of the county in which they are located. In both metropolitan and nonmetropolitan areas, communities located in rapidly growing counties are experiencing faster rates of growth than are similarly sized communities in slower growth counties. More importantly, however, patterns of settlement growth within each type of county appear markedly consistent. Within the metropolitan sector, for example, dispersion, and hence suburbanization, characterizes settlement patterns in areas that are losing population, experiencing moderate growth, or growing quite rapidly. Similarly,

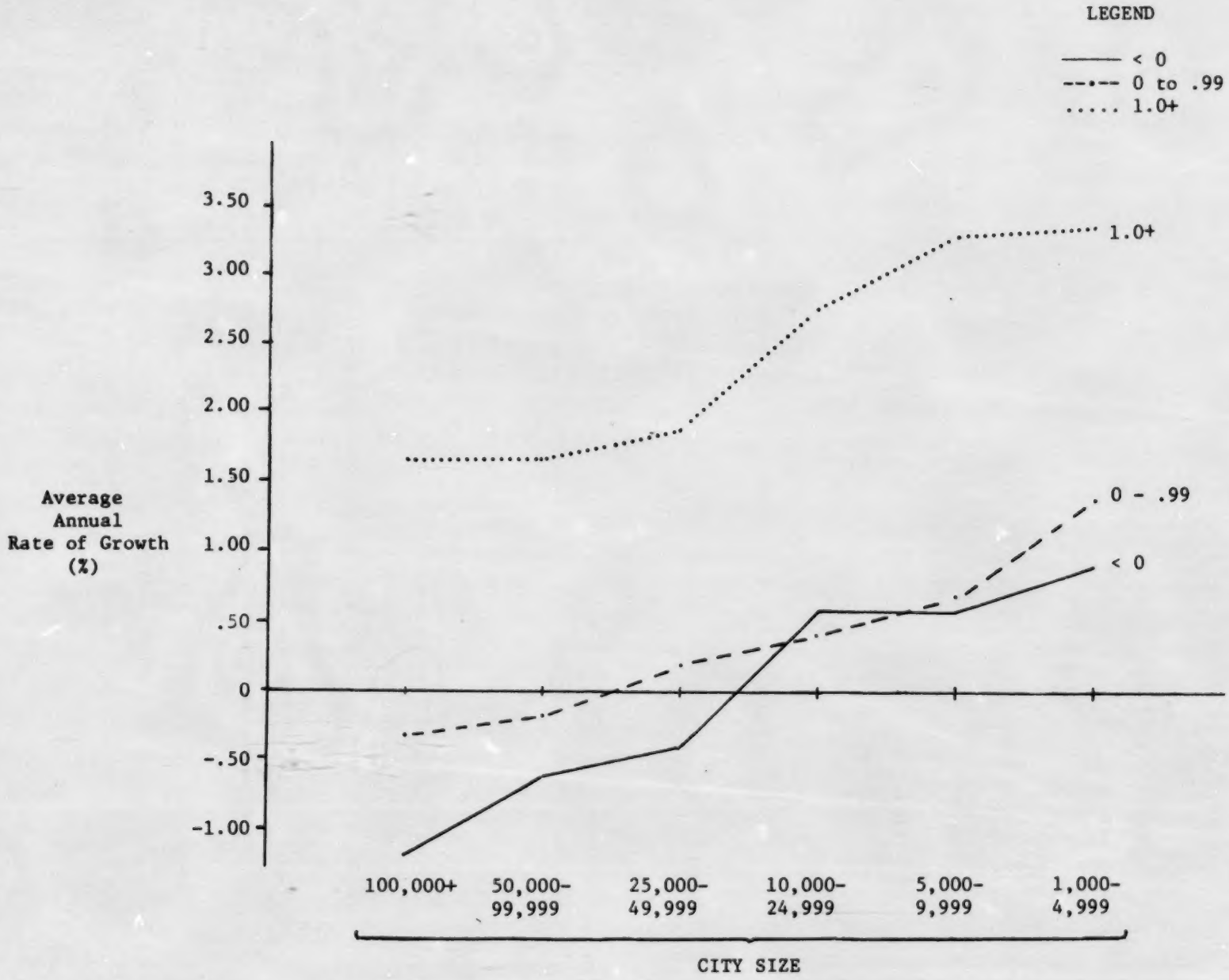

Figure 7--Patterns of city growth within metropolitan counties by county growth rate, 1970 to 1976

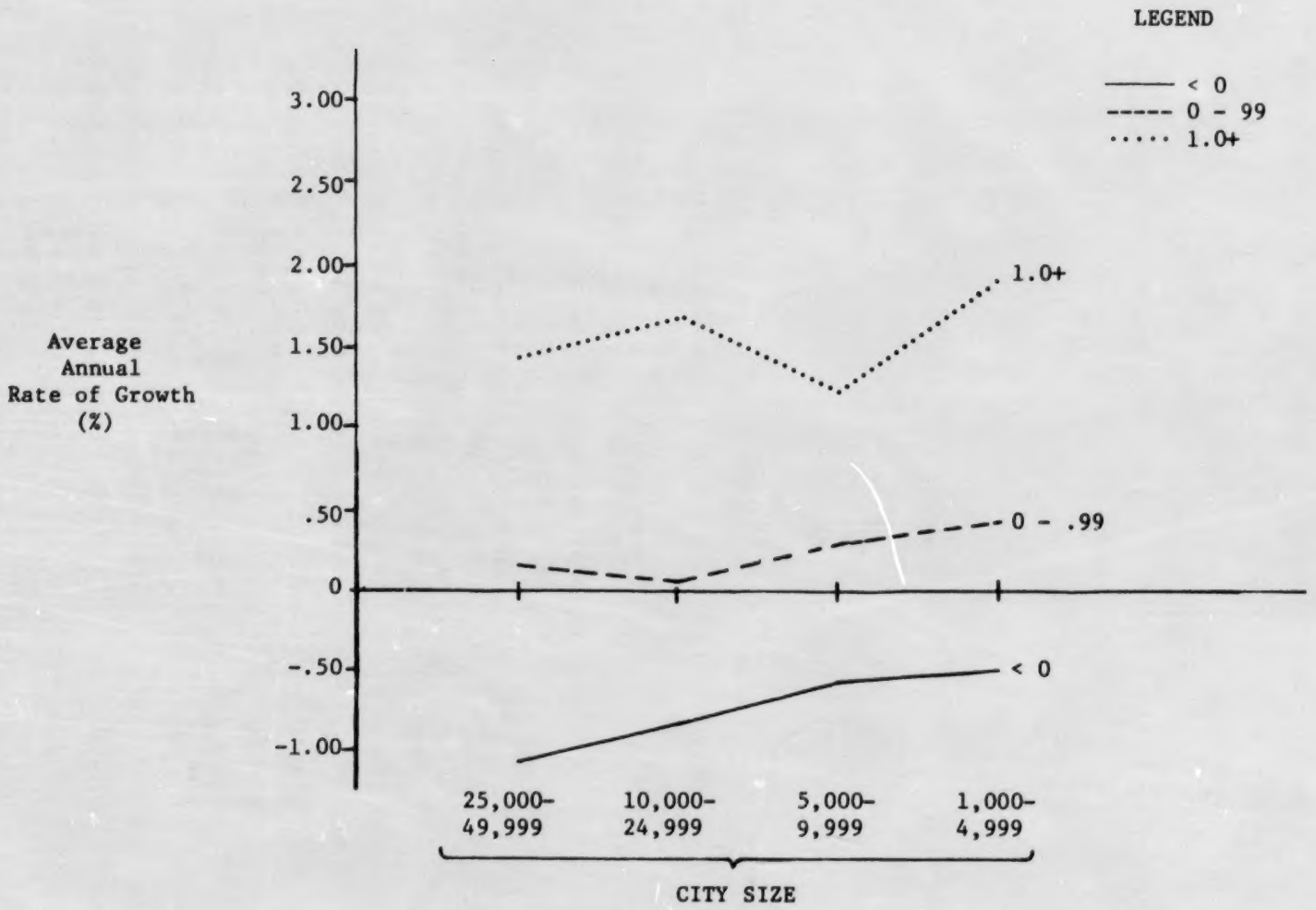

Figure 8--Patterns of city growth within nonmetropolitan counties by county growth rate, 1970 to 1976

within the nonmetropolitan sector, smaller communities are growing faster or (in the case of counties losing population) experiencing more modest rates of loss than larger communities regardless of their county's growth rate.

Thus, whether one measures differences in settlement maturation in terms of the region in which a county is located or the individual county's recent growth experience, remarkably similar growth structures are apparent. This consistency suggests that the recent tendency toward settlement dispersion in both metropolitan and nonmetropolitan areas of the United States is a manifestation of an historical shift in redistribution trends and not simply a product of single urban development sequence.

IMPLICATIONS OF RECENT PATTERNS FOR FUTURE TRENDS

After decades of stability, America's settlement patterns have recently undergone a significant transition. The most widely documented aspect of this transition has been the population shift from metropolitan to nonmetropolitan areas. As our analysis has demonstrated, however, the metropolitan to nonmetropolitan shift, is only one aspect of the recently emerging changes in distribution patterns. Settlement patterns within nonmetropolitan areas are also undergoing some marked changes.

Traditionally, the consolidation process that has concentrated population growth in large metropolitan areas at the expense of nonmetropolitan places has also transformed the distribution of people outside metropolitan centers. This transformation not only thinned out nonmetropolitan populations, but also consolidated the remaining population into a few, incipiently metropolitan, urban nodes. However, with the advent of renewed nonmetropolitan population growth, settlement patterns within America's more thinly settled areas have become more evenly distributed. Thus, recent patterns of community growth outside metropolitan areas reflect the rising influence of the population dispersion process.

Although the long-term implications of this shift are not yet apparent, the evidence supporting its emergence is both clear and pervasive. For example, regardless of whether nonmetropolitan areas are classified in terms of their susceptibility to urban influence, their location in an older mature or newly developing region, or their recent

growth experience, they all exhibit decided evidence of dispersion, i.e., the rapid growth of small peripheral communities. Moreover, the fact that this same decentralization tendency is evident in an even clearer form in metropolitan areas suggests that the appearance of dispersion is not simply a manifestation of urban maturation but represents, instead, an historic shift in settlement patterns.

What remains unclear, however, is the extent to which this shift in settlement patterns reflects a permanent realignment of the push and pull factors supporting population consolidation. For example, while an increasing proportion of the population appears to be choosing to live in small communities, the fact that small communities are growing fastest in the most urbanized nonmetropolitan areas suggests that such behavior may represent less a repudiation of urbanization _per se_ than an expressed distaste for life in large cities. As public opinion surveys have repeatedly shown, while Americans have an abiding distaste for life in large cities, their ideal residential community is not an isolated rural farm but rather a small, safe, and environmentally clean community within easy access of a large central city (Zuiches and Fuguitt, 1972). Thus, the apparent emergence of settlement dispersion may simply be an inevitable byproduct of increasing affluence and technological improvements that have only recently permitted Americans to act upon long-held predispositions. Whether Americans can continue to realize this ideal in a period of rising energy costs and continued devaluation of the dollar remains to be seen.

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